DEVELOPMENT AND CHARACTERIZATION OF DUAL MODALITY SYSTEM USING POLYMERIC NANOCARRIER

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SUPERVISOR'S DECLARATION

We hereby declare that we have checked this thesis and in our opinion, this thesis is adequate in terms of scope and quality for the award of the degree of Bachelor of Chemical Engineering.

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STUDENT'S DECLARATION

I hereby declare that the work in this thesis is my own except for quotations and summaries which have been duly acknowledged. The thesis has not been accepted for any degree and is not concurrently submitted for award of other degree.

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Dedicated to my parents.

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LIST OF ABBREVIATIONS

ACS	American Cancer Society
ADME	Adhesion, distribution, metabolism and excretion
BCS	Breast conservation surgery
BCT	Breast conservation therapy
CMC	Critical micelle concentration
DCM	Dichloromethane
DLS	Dynamic light scattering
EGFR	Epidermal growth factor receptor
EPR	Enhanced permeability and retention
ER	Estrogen receptor
FDA	Food and Drug Administration
HER2	Epidermal growth factor receptor 2
HPLC	High performance liquid chromatography
MDR	Multidrug resistance
PBS	Phosphate buffered saline
pCR	pathologic complete response
PEG	Polyethylene glycol
P-gp	P-gylcoproteins
PLGA-PEG	poly(D,L-lactic-co-glycolic acid)-block-poly(ethylene glycol)
PR	Progesterone receptor
RES	Reticuloendothelial system
RME	Receptor-mediated endocytosis
TNBC	Triple negative breast cancer
TPC6	Coumarin-6 loaded TPGS micelle

TPD	Docetaxel loaded TPGS micelle
TPDC6	Docetaxel-coumarin-6-loaded vitamin E TPGS micelles
TPGS	D-α-tocopheryl polyethylene glycol 1000 succinate
UV/VIS	Ultraviolet/visible